HUNTER VALLEY 99'ERS NEWS

TI 99/4A

HOME COMPUTER NEWSLETTER

SEPTEMBER 1987

TEXAS INSTRUMENTS

Newcastle & The Hunter Region

Home Computer USERS' GROUP

REGISTERED BY AUSTRALIA POST
PUBLICATION No NBG8023

The Secretary - HV'99ERS
6 Arcot Close, TARRO - NSW.
Australia - 2322

YOUR COMMITTEE

PRESIDENT
Paul Mulvaney
26 Marmong St.,
MARMONG POINT 2284
Ph. 583623

VICE PRESIDENT
Alan Lawrence
35 Bayview St.,
WARNERS BAY 2282
Ph. 486509

SECRETARY
Albert Anderson
6 Arcot Close,
TARRO 2322
Ph. 662602
Viatel 496626020

TREASURER
Peter Smith
8 Glebe St.,
EAST MAITLAND 2322
Ph. 336164
Viatel 493361640

SOFTWARE LIBRARIAN
Alan Franks
822 Pacific Hwy.,
MARKS POINT 2280
Ph. 459170

PUBLICATIONS LIBRARIAN
Allen (Joe) Wright
77 Andrew Rd.,
VALENTINE 2280
Ph. 468120

EDITOR
Brian Woods
9 Thirlmere Pde.,
TARRO 2322
Ph. 662307
Viatel 496623070

PURCHASING CO-ORDINATOR
Bob MacClure
75 Deborah St.,
KOTARA SOUTH 2288
Ph. 437431

TECHNICAL CO-ORDINATOR
Gary Jones
53 Janet St.,
JESMOND 2299
Ph. 573744

SIGs CO-ORDINATOR
Brian Rutherford
9 Bombala St.,
DUDLEY 2290
Ph. 498184

CONTRIBUTIONS

Members and non members are invited to contribute articles for publication in HV99 NEWS.

Any copy intended for publication may be typed, hand written, or submited on tape/disc media as files suitable for use with TI Writer (ie. DIS/FIX 80 or DIS/VAR 80). A suitable Public Domain word processor program will be supplied if required by the club librarian.

Please include along with your article sufficient information to enable the file to be read by the Editor eg. File Name etc. The preferred format is 35 columns and page length 66 lines, right justified.

All articles printed in HV99 NEWS (unless notified otherwise) are considered to be Public Domain. Other user groups wishing to reproduce material from HV99 NEWS may feel free to do so as long as the source and author are recognised.

Articles for publication can be submitted to the Editor, ALL other club related correspondence should be addressed to The Secretary.

DISCLAIMER

The HV99 NEWS is the official newsletter of the HUNTER VALLEY NINETY NINE USER GROUP.

Whilst every effort is made to ensure the correctness and accuracy of the information contained therin, be it of general, technical, or programming nature, no responsibility can be accepted by HV99 NEWS as a result of applying such information.

The views expressed in the articles in this publication are the views of the author/s and are not necessarily the views of the Committee, Editor or members.

TEXAS INSTRUMENTS trademarks, names and logos are all copyright to TEXAS INSTRUMENTS.

HV99 is a non profit group of TI99/4A computer users, not affiliated in any way with TEXAS INSTRUMENTS.

RANDOM BYTES

with

bob carmany

Another month, and I am back "pounding" away at the 'ol TI keyboard. A lot has happened in the past several months -- like a colossal system "crash" that wiped out one of my consoles and my 32K standalone. It turned out to be a blessing in disguise --of sorts. As the result of the demolition of my only 32K, I began searching for an alternate supplier. The trail led to a company in Minnesota named "The Captain's Wheel". I wrote for a brochure of their products and got a couple pages describing what they had. The first is a 3-slot do-it-yourself PEB for $35.00 (US). Ask Tony McGovern about it. The second was of more immediate interest to me. They had a 32K standalone advertised with a bunch of options. The basic unit sells for $49.00 ($39.00 for two or more). You can order options like: additional 8K blocks of memory from >2000 - >FFFF, a load interrupt switch, a software loader package, and much more. Three options maybe ordered (each 8K block counts as an option) at $10.00 each. It works quite well!! Incidentally , the address is: The Captain's Wheel, 17295 Chippendale Ave, Farmington, MN 55024 USA.

Well, let's get into some "good" stuff"!! There are basically two ways to save screens in TI-Forth. First, you can simply initialize a disk and save the screens without any further preparation. This creates a disk of screens that is unreadable or uncopiable except with a Forth copy routine or one of the track copiers.

The second way is to use the more conventional instructions contained in CHAPTER 5, page 5 of your manual. Start with a blank uninitialized disk in drive 1 (with TI-Forth loaded with screen 33 (-SYNONYMS). Then, enter the following:

```
0    FORMAT-DISK    (formats and
initializes the disk)
DISK-HEAD  (establishes the filename
SCREENS )
```

Now, load the -EDITOR option and type in:

```
1 CLEAR (fills screen 1 with blanks)

1 EDIT (allows you to edit screen 1)
```

We have a blank screen to work with -- A disk menu follows next! Having planned (hopefully) what you are going to include on this disk of screens, we can fill the remainder of the screen with the definitions necessary to do the actual loading process. They would look something like this:

```
: -DECOMPILER 3 LOAD ;
: -MODEM 7 LOAD ;
: -DISK/DIR 9 LOAD ;
```

Just keep going until you have everything listed with the appropriate screen number to load.

We can now define the word that will display the choices on the screen and actually run the whole thing. It would go something like this:

```
: MENU1 5 12 GOTOXY ."-MODEM"
(enter subsequent choices)
" " " " " " " " " "



;
MENU1
```

The last word, MENU1, will auto-run your menu screen when you enter 1 LOAD with your screens disk in drive #1. Of course, you could also use a message loop (take a look at screen 20 for an example) but that is a more complex approach to setting up a disk of menu screens.

Now, for a plea for H-E-L-P!! I have heard rumors of a program that will convert those 34-sector Gram Kracker files back into E/A program image. Does anyone know where I can get a copy of it? There was rumored to be such a program in the Ryte Data catalogue several months back but nobody seems to have seen a copy of it anywhere. With the cessation of Gram Kracker production, it could become a "hot" fairware item! Any progressive programmers want to give it a try?

Here is a short little program that appeared back in 1982. The author is Craig Miller of Millers Graphics (now MG). It will show you what amazing things you can do with a minimum of code.

```
100 CALL CLEAR :: CALL COLOR(2,6,6)
:: PRINT RPT$("+",252);RPT$("+",252
);RPT$("+",56) :: R=40 :: C=30 ::
CALL SPRITE (#1,42,2,25,17,R,C)

110 FOR K=1 TO 900 :: CALL POSITION
(#1,Y,X) :: R=R+80*(Y+R>200)-(Y+R<-
1) ::C= C+60*(X+C>250)-(X+C<-1) ::
CALL MOTION(#1,R,C) :: NEXT K
```

Here is another short 3-line program that I came up with in order to make use of the object code listings that you see from time to time. You can copy these D/V 80 files with FUNNELWEB and this program will convert them to D/F 80 files suitable for RUNning with the "Load and Run" option on either E/A or MM.

```
1 @=1 :: CALL CLEAR :: DISPLAY AT(2
,5):"80 COLUMN CONVERTER" ::DISPLAY
AT(5,@):"THIS PROGRAM WILL CONVERT
A":"'DIS/VAR 80' TEXT FILE TO A"

2 DISPLAY AT(7,@):"'DIS/FIX 80' FIL
E.":: FOR A=@ TO 3000 :: NEXT A ::
CALL CLEAR :: INPUT "FILE TO CONVER
T ":A$ :: CALL CLEAR

3 INPUT "FILE TO CREATE":B$ :: OPEN
#2:B$,DISPLAY, FIXED 80 :: OPEN #@,
DISPLAY, VARIABLE 80

4 LINPUT #@:C$ :: PRINT #2:C$ :: IF
EOF(@) THEN 5 :: GOTO 4

5 CLOSE #2 :: CLOSE #@ :: END
```

Well, the garden beckons and the lawn remains uncut (as usual) so I had better get this dumped to disk and give Richard Terry et. al. some space in this month's newsletter. 'Til next time . . .

FEEDBACK

FROM

RON KLIENSCHAFER

From observations I have made on the 'chicken scratchings' in the "Chain Mail" Newsletters that this 'out-of-townie' receives, I feel that they (the newsletters) do not require any editing of either content or publishers, albeit the 'chicken scratchings' are carefully placed so as not to deface the pages, the range of interests must be diverse and enormous. Ranging from ticks, brackets, arrows and even the occassional thumbnail dipped in tar, these markings cover everything from advertisements to the deepest recourse on problems in Assembly. Now being an 'out of townie', I read most of the articles in these mags, along with advertisements and would be most upset if I thought I may have missed anything. If I don't find anything that really grabs me I have even been known to jot down only page numbers so that I have something... Odd, you may say?? Well, why not? After all, I am one of those whose "Strange (???) Nocturnal Creatures that also own a modem". HMMM!!!

Maybe Joe's articles on Assembly have not loaded into the RAM in my skull (and I really do mean RANDOM!), but one thing that did click is his (?) suggestion that 'out of townies' be set up with a Software Chain. Now that would be a great idea! It would help us to keep up with the 'city slickers', it being very difficult to select software from the library even with descriptions, but it is something again to see a program and decide what it's liked or not, that would enable us 'out of townies' to build up our libraries and keep up with the Albys, Joes and other such lesser known members!! I for one would be only too willing to pay for any postage or charges that may be incurred and if it does transpire then please note that I have DSSD Drives!!

I do not wish to worry the membership but I noted with much concern in the August issue that Peter Smith now runs TWO RAM Disks with an AMIGA Monitor (RGB< I suppose?) and he is also THE TREASURER!!! Does anyone think that we may need an AUDITOR? It makes one wonder.

PS.
Many thanks for the service on the mags and please, keep them coming! I have also heard that a bloke who lives in the bush is interested in getting MICROpendium. If anything is organised regarding group subscriptions he can be contacted through Chaos Manor, where he is conducting research into the stresses placed on the Human structure when in the reclined position.

WANTED

Our very own Adventurer and Module Librarian, Rodney Gainsford, is VERY anxious to obtain an Extended BASIC Module. If you can help him out please get in touch with him.

Please ring him on Ø49-583515

A SMALL OOPS

In the article on the Eprom Programmer (August 1987), some text was accidentally left out (it may or may not have been obvious). When using 24 pin Eproms, for example 2532, the Eprom must be inserted in the socket close up to the Module socket. That is to say that pins 1, 2 and 27, 28 of the ZIF socket are not used.

Ron Kleinschafer

3.8 GALLONS - 100 MILES

by anon member (not to be confused with a non-member!)

Once upon a time, having undertaken the nubility quest, my next ambition was to acquire a set of wheels (back then these activities were not necessarily mutually inclusive). The contract that came with the wheels included the requirement to be able to quote fuel consumption figures for comparison whenever the subject was raised. I was not very successful at this as I kept a record of fuel consumption (the vehicle's, that isØ and always quoted actual figures.

Over the years I continued the practice of maintaining vehicle log books. Along the way calculators arrived on the scene and the memory models were a big help with the fiddly bits when there were a couple of 1Ø-bucks-worths in between fillups.

So, when I acquired my 99/4A and began to have a go at programming, one of my first efforts was a fuel consumption program as it seemed to be a fairly simple, straightforward exercise. The following program, which surprised me by working almost first up, was the result:-

```
5 REM FUEL CONSUMPTION
1Ø CALL CLEAR
2Ø  PRINT "PRESS F OF P FOR":
:"FULL TANK OR PART FILL": :
3Ø CALL KEY(3,R,S)
4Ø IF S=Ø THEN 3Ø
5Ø IF R=7Ø THEN 15Ø
6Ø IF R<>8Ø THEN 3Ø
7Ø INPUT "HOW MANY PART FILLS
? ":A
8Ø B=Ø
9Ø FOR J=1 TO A
1ØØ  INPUT  "DOLLARS  & CENTS
(PART FILL)? ":C
```

```
110 INPUT "CENTS PER LITRE
? ":D
120 L=100*C/D
130 B=B+L
140 NEXT J
150 INPUT "DOLLARS & CENTS
(FULL TANK)? ":C
160 INPUT "CENTS PER LITRE
? ":D
170 L=100*C/D
180 T=B+L
190 INPUT "PRESENT ODOMETER
? ":E
200 INPUT "PREVIOUS ODOMETER
? ":F
210 G=(E-F)/T
220    KMPL=INT(100*(G+.05))/
100
230    LKM=INT(100*(100/G+.05
))/100
240    MPG=INT(100*(G*2.82481
+.05))/100
250 CALL CLEAR
260 PRINT TAB(5);"KMPL";TAB
(13);"MPG";TAB(19);"L/100KM"
::::     TAB(4);KMPL;TAB(11);
MPG;TAB(19);LKM ::::::
270 PRINT "FOR ANOTHER ENTRY
PRESS":"SPACE BAR" ::
280 CALL KEY(3,R,S)
290 IF S=0 THEN 280
300 IF R=32 THEN 10
```

The input "messages" should be self-explanatory. If a full tank is preceeded by one or more part-fills, pressing 'P' covers this sequence.

Flushed with success after this effort, I decided to then try a program to give some form of visual representation. I usually do several calculations at a time and the initial intention was to evolve the concept to combine both programs. Maybe one of these days when I have some spare time...

```
5 REM FUEL CONSUMPTION GRAPH
10 CALL CLEAR
20 INPUT "HOW MANY ENTRIES
? ":E
30 Y=1
40 FOR Q=1 TO E
50 INPUT "DATE? ":A$
60 INPUT "CONSUMPTION FIGURE
? ":F
70 Y=Y+2
80 Z(Q)=Y
90 B$(Q)=A$
100 G(Q)=F
110 NEXT Q
120 CALL CLEAR
130 FOR X=8 TO 28 STEP 5
140 CALL VCHAR(1,X,124,24)
150 NEXT X
160 PRINT"     +";

170 FOR L=1 TO 4
180 PRINT"-----+";
190 NEXT L
200 PRINT TAB(6);"0";TAB(11);
"5";TAB(15);"10";TAB(20);
"15";TAB(25);"20" ::::  TAB
(10);"KM PER LITRE"
210 FOR Q=1 TO E
220 FOR J=1 TO LEN(B$(Q))
230 CALL HCHAR(Z(Q),2+J,ASC
(SEG$(B$(Q),J,1)))
240 NEXT J
250   CALL   HCHAR(Z(Q),9,30,
G(Q))
260 NEXT Q
270 GOTO 270
```

When I resurrected these programs with a LIST, I realised that they were pretty much in the rough & ready category. With hindsight there are some unnecessary complexities. However, I decided to leave them as is. Actually the thought of trying to unravel the original (reasoning?) processes was sufficient dis-incentive.

I can't recall how I came to use a mix of PRINT and V/H CHARS for the graph but they came together quite well. Initially, line 250 was used for simplicity and the consumption figures are rounded off in the process. The program will accept up to 9 entries. When inputting dates use the format 12MAY, 05AUG

In the fuel consumption program I included outputs of kms per litre, mpg (a little touch of nostalgia there) and litres per 100km. I always use kms per litre. Over many 1000's of kilometres (and previously miles) I've found kmpl (mpg) convenient and easy to use when calculating the fuel requirements against the distance to travel. I cannot understand why the awkward inverse ratio system of litres per 100km was 'imported' when metrics were adopted. Perhaps if we've used gallons per 100 miles? As a trial I checked back in my HR Holden log and found that it used to ~~60~~ use about 3.1G/100M on a country run. Somehow it doesn't seem as meaningful as being able to quote (in them days) "I get aroun 32 out of mine on a trip".

MULTIPLAN

PRINTER CONTROLS

BY

PETER SMITH

Having recently been elected as treasurer of this flourishing club, I began preparations to keep the books in a way in which I could plan my overseas holiday with care.

Brian, the last treasurer, had used Multiplan to maintain the books, but, being pig-headed and wanting to do things my own way, I set about creating a new set of templates to use . These worked out well enough, but two of the pages were difficult to print because they took up more than 80 columns.

No trouble really, just initialize the printer to 137 cols before loading M/P.

"Ho!Ho!Ho!"... How many times do you think you can forget to do such a simple thing? Well I must have done it literally 100's of times.

I set about trying to find two articles I remembered reading, dealing with imbedding printer codes in the **spreadsheet** itself.

You guessed it. I found one which made no sense, and certainly didn't work, and couldn't find the other article which I had read only recently.

Nothing left but to try some ideas myself.

For once things worked to plan and I offer the following proceedure as a way of taking control of your printer in Multiplan.

Being able to use enlarged, condensed, emphasised, italic and other types of print could certainly make your documents look much better.

To do this I firstly created a new sheet and formatted it exactly as below.

COL1	COL2	COL3	COL4
CONDON	AA	CONDOFF	BB
ENLRGON	CC	ENLRGOFF	DD
ITALON	EE	ITALOFF	FF
EMPHON	GG	EMPHOFF	HH
DUBON	II	DUBOFF	JJ
NLQON	KKK	NLQOFF	LLL

This sheet is then saved in the following way....

Select **'TRANSFER'** and then **'OPTION'**, then select **'SYMBOLIC'** and then press **'ENTER'**

This will allow you to save this file to disk, by now selecting **'TRANSFER'** again ; **'SAVE'**; a filename.. such as 'PRINT' and then pressing enter.

Wow!! Isn't that a process? Well it ain't ova yet friend...

By saving the file as a **'sylk file** you are able to edit it using a **DISK SECTOR EDITOR** so that your printer code is imbedded and then you can **MERGE** it into your sheet at your convenience, rather like merging **XB** programs.

Using **DPATCH** for instance find the location of the file you saved and then, using the **ASCII** mode, locate the **'AA'**, place the cursor on the first 'A' and select the **'HEX'** mode.

Now type **1B0F** over the **4141.**

(**1B0F** is the code to tell my printer to execute **CONDENSED** print.)

Rewrite the sector and then select **ASCII** again and then find **'BB'**. Repeat the process as follows...

Replace **BB** with 1B0F; **CC** with 1B0E; **DD** with 1B14; **EE** with 1B34; **FF** with 1B35; **GG** with 1B45; **HH** with 1B46; **II** with 1B47; **JJ** with 1B48; **KKK** with 1B7801 AND **LLL** with 1B7810.

These codes suit my **BROTHER** printer and seem pretty standard, but just check your codes out and make sure they match your printer.

To use the file to control my **M/P** printout ,I loaded (don't forget to reset your option under **TRANSFER**, to **NORMAL**) my club credit sheet (Which I had created some time ago) and did the following..

1..I inserted 10 lines before

row 1.

2..I selected **SYMBOLIC** under **TRANSFER** and pressed **ENTER.**

3..I then loaded the 'PRINT' file and found it had loaded into the 10 lines I had inserted.

4..I then used the **'COPY' 'FROM'** command (Remember that the actual printer control codes to copy will appear as funny characters in the cell to the right of the name describing the control) to place the controls where I wanted them. (Usually in the cell immediately to the left of the cell where you wish the printing to take effect)

Much practice printing took place so that the printout was spaced properly, but finally I was satisfied.

5..When I was finally pleased with the placement I simply deleted the lines which I had inserted previously.

The print control files I have created will be added to the club software library for inclusion on any club disks if anyone wants them.

I hope my ramblings have made sense to you, and will help someone, one of these days, dress up their **MULTIPLAN** sheets.

USING A COMMAND FILE

A TI-Writer tip

by

PETER GLEED

This article is reprinted from the Melbourne TIMES, newsletter of the Melbourne Users Group. The author is Peter Gleed, the Editor of the Mebourne Newsletter.

I use TI-WRITER quite a bit. This newsletter would be very hard to produce without the help of a word processor. My spelling mistakes are quickly corrected, paragraphs are moved around and lines are re-written numerous times to get them to sound as I intended them to sound.

Using the word processor as much as I do, I have found an easy way to take care of the redundant keystrokes necessary on each document. I no longer have to include a fill, left or right margin, line spacing or other command to get the computer to work for me. What's been done is a file I call "DSK1.TL", or a transliterate file used at the beginning of every document.

TI-WRITER has a "Mail Merge" feature and a "Define Prompt" command that can be included in a document. Using these features, I created my transliterate file to prompt for the line spacing, left and right margins, indentation and other options I wish to include in the file.

To start one of your own, consult the TI-WRITER Manual on the .DP or Define Prompt command. In my file, I define prompt 14 as line spacing, 15 as left margin, 16 as right margin, 17 as the indentation and so on until all of the options I require are included in the file.

The file looks like this:

```
.FI <ENTER>
.DP 14:Line spacing 1 or 2 <ENTER>
.DP 15:Left margin- <ENTER>
.DP 16:Right margin- <ENTER>
.DP 17:Indent- <ENTER>
.LS *14* <ENTER>
.LM *15*;RM *16* <ENTER>
.IN *17* <ENTER>
```

At the beginning of each document you wish to use these prompts and commands on, simply use as the first line the following:

```
.IF DSK1.TL
```

This includes your transliterate file at the beginning of your document, which is executed during the FORMAT TEXT option from the main screen without printing any of these commands. The prompts appear before the printing of the document begins, allowing you to set your margins, etc, from screen prompts rather than including them in your text each time.

Try it out on your own, and see what works best for you. I have found it an invaluable way to save time and reduce the possibility of forgetting a command.

PROGRAM AND HINTS FOR MINI MEMORY

BY

KEVIN COX

This program was modified by Kevin, a member of HU99ers and the Banana Coast Users Group. He would like to hear from anybody who may use this program or has trouble with it or Mini-Memory. Contact him at :
7 Dewing Close
BAYLDON NSW 2452

This program was originally written for the E/A Module and using the RS232 printer. I have modified the program so that it will run with the Mini-Mem and a parallel printer. The longer you hold down the ENTER key, the more times the statement will be printed - this shows the amazing speed of Assembly Language.

I've found that there is a little difference between using the E/A Module & the Mini-Mem Module in that using M-M, the labels are limited to 2 digits and it cannot recognise the statements BYTE & RT plus the REF & DEF cannot be used, instead EQUates are used and the program has to have a name and an address so the computer can find it.

PIO Printer Subroutine

```
VM  EQU >6028       *VM=VMBW
VS  EQU >6024       *VS=VSBW
DS  EQU >6038       *DS=DSRLNK
RU  MOV R11,R10     *SAVE RETURN POINTER
NN  CLR R12
    LIMI 2
N1  TB 7            *WHEN "FCTN" PRESSED
    JNE N2          *EXIT ROUTINE.
    TB 5            *WHEN "ENTER"PRESSED
    JEQ N1          *PRINT ANOTHER LINE
    LIMI 0
    BL @P0
    JMP NN
N2  B *R10          *RETURN
P0  MOV R11,R9      *SAVE RETURN
    LI R0,>0002     *WRITE TEXT TO VDP
    LI R1,TI
    LI R2,62
    BLWP @VM
    LI R0,>1100     *WRITE PAB TO VDP
    LI R1,PB
    LI R2,13
    BLWP @VM
    BL @P3          *OPEN FILE "PIO"
P1  LI R1,>0300     *SET WRITE OP-CODE
    BLWP @VS        *TO PAB
    BL @P3
    LI R1,>0100
    BLWP @VS
    BL @P3
    B *R9           *RETURN
P3  LI R3,>1109     *SET PAB POINTER
    MOV R3,@>8356
    BLWP @DS
    DATA >8
    JEQ P4
    B *R11          *RETURN
P4  CLR R2          *I/O ERROR ROUTINE
    MOVB R0,R2
    SWPB R2
    MOVB @NO(R2),R1
    LI R0,49
    BLWP @VS
    LI R0,42
    LI R1,ER
    LI R2,7
    BLWP @VM
    LIMI 2
    JMP $
ER  TEXT 'ERROR-
NO  TEXT '0123456789ABCDEF'
*PERIPHERAL ACCESS BUFFER(PAB)
PB  DATA >0012      *OP-CODE/FLAG STATUS
    DATA >0002      *VDP BUFFER
    DATA >503E      *RECORD LENGTH/# OF CHARACTERS
    DATA >0000      *
    DATA >0003      *NAME LENGTH
    TEXT 'PIO'
TI  TEXT 'The quick brown fox jumps over the lazy dog s'
    TEXT ' back. 1234567890'
    END
    AORG >701C      *These lines show how to add program
    DATA >7FB2      *name and entry point to the REF/DEF
    DATA >7FE0      *table.This step is required with any
    AORG >7FE0      *program entered with the line-by-line assembler
    TEXT 'PRINTS'   *the name of the program
    DATA RU         *this is the entry point or the starting point
```

IN THE NEWS

SNIPPETS, GOSSIP ETC
COMPILED BY
JOE WRIGHT

The following articles have been taken word for word from newsletters in the library.

From TIDBITS, Memphis, June Newsletter.

Gary Cox writes;
Rave 99 is now marketing a PEB interface for the speech synthesizer which allows you to plug your speech synthesizer into a card and put it into the PEB. Price for the card is $50. Their address is;
112 RAMBLING Rd.
VERNON CT 06066

Version 4.2 of MASS-TRANSFER has been released. This new version corrects a few small bugs and among the new features is a new type of file transfer called YMODEM which is faster than XMODEM transfer.

In the same newsletter a gentleman by the name of Beery Miller reports; John Clulow, original author of the New Horizon's Ramdisk operating system (ROS). has developed a fantastic new product for the TI. This new hardware/software product allows implementation of an additional 16k of memory to the TI. This extends the 32k now used to 48k of memory. John has managed to introduce memory that can be used in the DSR ROM area as non-DSR Ram. Some people may wonder what the benefits of such a device would be. I will tell you!!!. One of the main advantages I have already read are that the authors of PRBASE and DM1000 are already modifying their programmes to accommodate this additional memory. This means doubling the size of most data base programmes and more features to others. In addition J.P.HODDIE, author of the 80 column version of TI-WRITER for the MYARC 9640, has made plans to enhance the features available on the TI99/4A version of TI-WRITER. This in itself, could be worth the purchase of the hardware project. Just think, larger buffers on terminal emulator programmes, quicker disk copiers, larger and better graphic programmes, etc could be in the palm of your hand.

Already since his first release of info on this project, additional features have been added to the board. Currently, a real time clock/calendar can be added to the card at a minimal cost. Additionally, John Clulow has plans of adding Gramkracker capabilities to the card at only another $40/50 investment.

From the August issue of TIDBITS, and again in Gary Cox's article.

Corcomp Inc of
211-G E.
WINSTON ROAD
ANAHEIM
CA 92806

has released a new word processor called Writease Version 1.1. Requirements are at least XB, 32K, Disk Drive and printer. The JUne edition of Micropendium has a complete review. The reviewer gives it an 'A' rating for performance. ease of use 'A', value for money 'B', and a 'D' for documentation.

From the MAY newsletter of the ATHENS Computer Club; an article which first appeared in the L.A. TOPICS. Written by Dick Dunbar.

MYARC'S other goodies: The 9640 isn't the only new thing ready to ship in the middle of January. Their new hard disk controller card will be ready then, too, according to the news nuts. This card will be able to control hard disks with up to 256 Mbytes (256,435,456 bytes) of storage. That's and awful lot of game programmes, spreadsheets, or whatever you want to store. Personally, I have a 10 Mbyte hard disk, and can't imagine ever filling it up unless I went hog wild and put everything on it.
I don't do that, however. I keep on the hard disk all the programmes and files that I use regularly, and relegate archival and low usage stuff to floppy disks. Even so, I rarely have to crank up my floppies, mostly when I get some new software that needs to be tried out before earning a spot on the hard disk. If I like it and expect to use it a lot, it gets copied to the hard

disk. If I can't use it with the hard disk, it will probably go into the trash can..

Even a 5 Mbyte hard disk is well worthwhile - I havn't filled mine nearly that full yet, and you still get the benefit of the much faster access. hard disks spin at 12 times as fast as floppies, and don't have any spin up delay, since they are allows spinning. But I digress from the subject at hand - the new MYARC controller.

This controller replaces the old MYARC personality card and the Western Digital controller which were required before to set up a hard disk system for the TI99/4A. It has more capacity, and costs less (around $200) than the personality card alone. You now need add just a bare drive and the cabinet with power supply, and your in business. The bare drive can be obtained for as little a $99 (5Mbyte), $99 (10Mbyte) if you check out the adds in BYTE or COMPUTER SHOPPER carefully, and a cabinet /power supply should be obtainable for in that same range. If you install the drive in the P-BOX or in a cheaper cabinet with no power supply, you can get a power supply adequate for it for less than $30. By the way, the new controller can be expanded to control floppy disks as well for a bit more money. I don't know how MUCH more money yet, but I would expect it to be reasonable. You would then need only one slot in your P-BOX to control both hard and floppy disks, rather than the two that are currently required.

From the same Newsletter article; Ryte Data has a number of interesting goodies in their latest catalogue. (I have taken only one out of the article)

MegaRam - a full Megabyte of memory expansion- 1024k of memory - usable as a Ramdisk, or as ordinary memory using bank switching techniques from assembly language programmes. This unit is not a P-BOX card, but a stand alone unit, since it requires console address lines not available from within the P-BOX. It's not cheap - the price tag is $575.95 US.

MAGICAL MYSTERY TOUR

A strange sight was to be seen on the shores of Lake Macquarie one Sunday recently - these odd looking people kept roaring up to a bus stop, leaping out of their cars, noting the section number, racing down to the end of a jetty --- but instead of diving in, they bowed their heads to the south or even knelt and said their prayer which was inscribed right on the end of the jetty --- I LOVE MY T.I.

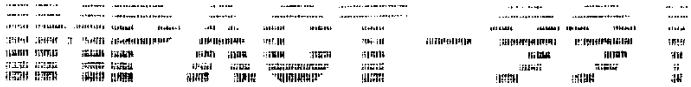
Having paid homage to the lake, being uplifted by the message, they all then rushed back to their cars and sped off. After much stopping and starting and having to decipher strange clues and messages --how could anyone be expected to work out 9^2+18 without a 99 in the car? -- we all arrived safely at Jesmond.

An interesting time was then had by the President and others deciding which of the mystery answers were correct (the questions being cunningly written to confuse the opposition or was it due due to random processing?).

As usual the H.V.99'ers had a good day - thanks to Garry Jones - and we all hope that your daughter, Chrisie, is making a swift recovery.

The final results of the 'rally' were:-

FIRST prize went to Tim & Jennie Watkins, who offerred the judges the largest bribe. Bringing up the rear were "The Lovebirds", aka Darren MacClure & friend Leigh-Anne Barlow. From all accounts they must have had other things on their mind, or were given the wrong question sheet, because they didn't get any of the questions right! Maybe Darren's father, Soldering Iron Bob, sabotaged their effort???



TEXTWARE, SOFTWARE, and ELSEWHERE
Happenings in the T.I. World Community
by JACK SUSMAN

WORD HUNTING
PRINTING
AND XB SPEED

Puzzles are a word-processing tool we often forget about. Although I'm not much of a word hunt person (word search, find-a-word, whatever), my fifth-grade students are. I prefer crosswords or cryptograms, but wordhunts have their value. They are also a very pleasant way to introduce the names of bones in the human skeleton or the Presidents or geometrical terms. Computers are great teacher helpers in these matters. All one has to do is find a puzzle-creator program from somewhere and type in the words. The sorting and placement and completion of the puzzle is done by our 99. So is the making of hardcopies of puzzle, wordlist, answers. It's so easy. But not always so quick.

Way back in 1982 *WORD SAFARI* was programmed for TI. It's amazing how many people own it but never use it. Most people got it with OLDIES BUT GOODIES before they got printers or disk drives. By the time they got these things they'd long since forgotten this puzzle gem.

I have six word hunt programs, PD and commercial, but there was always a few things about WS that appealed to me. (The "thinking numbers" on the lower right screen, for one.) Though it was soundless and colorless and was SLOW BASIC and had very poor printouts, the program had a structure I liked. The way the menu operation worked appealed to me.

I decided to use that original structure to make a more modern version of this puzzle, suited for disk. First it had to be XB for speed and because I don't know assembly. Then it had to have a continuing music pattern while the reading was going on internally. It also had to have color. And some better screen directions. And much better hardcopies (enlarged, double strike, etc.) with a better overall look. It also had to be drastically reduced in size, though XB would take care of some of that automatically.

I printed out all six of my word hunt puzzles to see what features I wanted for this new one and how I could most efficiently program it. It was fun. Besides the menu operation, I found the sizes offered were excellent for the different kinds of things I planned to do in my classroom. Each of the programs presented me with interesting concepts and interesting problems. However, after three days (nights, actually) I had a debugged version which satisfied me. Then, as I do with all programs, I gave it to some adults and some kids to play with. The input from them helped me fine tune the project. I then (as I always do) put it away for a couple weeks.

Later, I took the "worker" disk out of storage, turned on my Gemini, and set out to do my first "official" school puzzle: names of dinosaurs (thus I had to use the large square).

Perfect.

I made 27 copies of the puzzle and word list for the kids and one copy of the answers for me. FAST!

Then I put this right on my *FUNLPLUS!* and was ready to use it whenever I word processed. Very handy. I since have added a few subprograms from Jim Peterson's wonderful *NUTS 'n BOLTS* disk which will not appear in the succinct piece below.

Anyway, I'm not permitted to print the six original hunt programs, but if you have a copy of *WORD SAFARI* and/or some others you might want to try them out if you haven't used them for a while; then print out a copies of the listing.

Next type in a copy of *WORD HUNT*, try it out, and make some comparisons. This will give you a good idea of how I went about the task.

Think about some really good programs you recall from the past, dig them out, look them over, see if you can brighten them up, make them better. Sometimes it'll take drastic changes. Sometimes little. But in either case you've had some fun with some programs you probably would have left forgotten in a box in the closet. Now you can enjoy them all over again.

NOTE: When I first wrote the program I was going to write it in BASIC. After I translated quite a few line from my flowchart notes, I decided to go into XB. I continued with the PRINT and colon lines instead of DISPLAY AT statements until testing. It turned out to be fine and fast as it was, so I left them in. Those of you who'd like to tighten this even more, adding or changing features, send me a copy. If the improvements are really good, I'll print an update in a future column. (Am also looking for original SHORT programs in XB for inclusion here with full credit.)

WORD HUNT

```
        100 @=1 :: CALL CLEAR :: DIM
 A$(728),A(7),B$(25)
110 C$="0" :: FOR B=@ TO 8 :
: CALL COLOR(B,2,13)
120 NEXT B :: CALL CHAR(96,"
0"):: GOSUB 200 :: PRINT "
WORD HUNT PUZZLE ": : : : :
: : : : : : :: PRINT "  ^^^s
trike^^^any^^^key^^^" :: GOS
UB 750
130 GOSUB 200 :: PRINT " WOR
D HUNT PUZZLE  ": : :: PRINT
 : :" CHOOSE" :: PRINT :"
1  SETUP (CHOOSE FIRST)" ::
PRINT :"   2  INPUT PUZZLE"
140 PRINT :"   3  OUTPUT LIS
T"
150 PRINT :"   4  OUTPUT ANS
WER" :: PRINT :"   5  QUIT":
 : : : :
160 GOSUB 750 :: IF C<49 THE
N 160
170 IF C>53 THEN 160
180 ON C-48 GOSUB 770,230,97
0,870,190 :: GOTO 130
190 CALL CLEAR :: STOP
200 CALL CLEAR :: CALL SCREE
N(11):: CALL VCHAR(@,@,96,48
):: CALL VCHAR(@,31,96,48)::
 FOR D=@ TO 8
210 CALL SOUND(-999,VAL(SEG$
("262262294330493924404945Z
3587659698784",INT(12*RND+@)
*3-2,3)),0,VAL(SEG$("1311751
96",INT(3*RND+@)*3-2,3)),5)
220 NEXT D :: RETURN
230 GOSUB 200 :: PRINT " CHO
OSE " :: PRINT :"   1     10
X10 PUZZLE" :: PRINT :"   2
    20X20 PUZZLE" :: PRINT :
"   3     25X25 PUZZLE": : :
 : : : : : : : :
240 GOSUB 750 :: IF C<49 THE
N 240
250 IF C>51 THEN 240
260 E=(C-48)*10-5*INT(C/51):
: GOSUB 200 :: F=@ :: G=@ ::
 H=@ :: IF I=0 THEN 280
270 INPUT " TITLE OF PUZZLE?
 ":D$ :: INPUT " HOW MANY CO
PIES? ":F
280 INPUT " HOW MANY WORDS?
":J :: IF J<26 THEN 300
290 PRINT "SORRY: 25-WORD MA
XIMUM." :: GOTO 280
300 FOR B=0 TO J-@
310 INPUT " WORD "&STR$(B+@)
&" ? ":B$(B):: IF LEN(B$(B))
>2 THEN 330
320 PRINT "SORRY: 3-LETTER M
INIMUM." :: GOTO 310
330 IF LEN(B$(B))<11 THEN 35
0
340 PRINT "SORRY: 10-LETTER
MAXIMUM." :: GOTO 310
350 NEXT B
360 INPUT "ANY CHANGES? (Y/N
) "!E$ :: IF E$<>"Y" THEN 39
0
370 INPUT "WHICH NUMBER? ":B
380 INPUT "MAKE CORRECTION?"
:B$(B-@):: GOTO 360
390 GOSUB 200 :: PRINT : : :
"          THINKING..." :: A(
0)=@ :: A(4)=-@ :: A(@)=E+@
:: A(5)=-A(@):: A(2)=A(@)+@
:: A(6)=-A(2):: A(3)=A(2)+@
:: A(7)=-A(3):: B=E+3
400 K=(E+2)^2-@-B :: FOR L=B
 TO K :: A$(L)="  "
410 NEXT L :: M=E+2 :: K=M*M
-M :: FOR B=0 TO K STEP M ::
 A$(B)="**" :: A$(B+E+@)="**
" :: A$(B/M)="**" :: A$(K+B/
M)="**"
420 NEXT B :: K=0 :: FOR N=0
 TO J-@ :: D=0
430 D=D+@ :: E$=STR$(D)&" "
:: CALL HCHAR(23,25,ASC(E$))
:: CALL HCHAR(23,26,ASC(SEG$
(E$,2,@))):: IF D<7% THEN 49
0
440 J=N :: GOSUB 200 :: PRIN
T "SORRY: CAN ONLY SQUEEZE I
N";STR$(J);" WORDS.": : : :
: :: PRINT " CHOOSE" :: PRIN
T :"   1    USE "!STR$(J);"P
RESENT LIST." :: PRINT :"
2    BEGIN AGAIN": : : : : :
 : : : : :
450 GOSUB 750 :: IF C<>49 TH
EN 470
460 GOSUB 200 :: PRINT "
     THINKING..."! : : : : :
 : : : : : : :: GOTO 620
470 IF C=50 THEN 740
480 GOTO 450
490 B=INT(((E+2)^2-E)*RND)+E
 :: IF A$(B)<>"  " THEN 430
500 FOR D=0 TO 7
510 IF K<8 THEN 530
520 K=0
530 L=B+A(K):: FOR P=2 TO LE
N(B$(N)):: IF L<E+2 THEN 570
540 IF A$(L)<>"  " THEN 570
550 L=L+A(K)
560 NEXT P :: GOTO 590
570 K=K+@
580 NEXT O :: GOTO 430
590 L=B :: FOR P=@ TO LEN(B$
(N)):: A$(L)=SEG$(B$(N),P,@)
:: A$(L)=A$(L)&A$(L):: L=L+A
(K)
600 NEXT P :: K=K+@
610 NEXT N
620 FOR B=0 TO (E+2)^2-@ ::
IF A$(B)<>"  " THEN 640
630 A$(B)=CHR$(INT(26*RND)+6
5)&"  "
640 NEXT B :: GOSUB 200 :: I
F I=0 THEN 660
650 PRINT " P R I N T I N G"
660 FOR M=@ TO F :: IF I=0 T
HEN 680
670 PRINT #I:CHR$(27)&CHR$(8
7)&CHR$(@): : :"      ";D$:"
    ^^^^^^^^^^";
680 FOR B=0 TO E+@ :: PRINT
#I:CHR$(27)&CHR$(87)&CHR$(@)
:"   ";:: FOR K=B*(E+2)TO (B
+@)*(E+2)-@ :: PRINT #I;SEG$
(A$(K),@,@);
690 NEXT K
700 NEXT B
710 NEXT M :: IF I<>0 THEN 7
30
720 PRINT :"       PRESS ANY
 KEY";:: GOSUB 750
730 PRINT #I:CHR$(27)&CHR$(8
7)&CHR$(@): : :
740 RETURN
750 CALL KEY(0,C,Q):: IF Q<=
0 THEN 750
760 RETURN
770 GOSUB 200 :: PRINT " CHO
OSE" :: PRINT :"   1   SCREE
N" :: PRINT :"   2   PARALLE
L PRINTER" :: PRINT :"   3
 OTHER": : : : : : : : : : :
 : : : : :
780 GOSUB 750 :: IF C<49 THE
N 780
790 IF C>51 THEN 780
800 I=0 :: IF C=49 THEN 860
810 I=@ :: F$="PIO" :: IF C=
50 THEN 830
820 INPUT " DEVICE ? ";F$
830 IF C$="0" THEN 850
840 CLOSE #@
850 OPEN #@:F$,OUTPUT :: C$=
"1"
860 RETURN
870 GOSUB 200 :: IF I=0 THEN
 890
880 INPUT "HOW MANY COPIES?
":G :: PRINT : : :"PRINTING
ANSWERS."
890 FOR M=@ TO G :: IF I=0 T
HEN 910
900 PRINT #I: : : :"      ";D
$:"      ^^^^^^^^^^";
910 FOR B=0 TO E+@ :: PRINT
#I: :"    ";:: FOR K=B*(E+2)T
O (B+@)*(E+2)-@ :: PRINT #I;
SEG$(A$(K),2,@);
920 NEXT K
930 NEXT B
940 NEXT M :: IF I<>0 THEN 9
60
950 PRINT :"       PRESS ANY
 KEY";:: GOSUB 750
960 PRINT #I: : : : :: RETUR
N
970 GOSUB 200 :: IF I=0 THEN
 990
980 INPUT "HOW MANY COPIES?
":H :: PRINT : : :"PRINTING
LIST."
990 FOR M=@ TO H :: IF I=0 T
HEN 1010
1000 PRINT #I: : : :"      ";
D$:"      ^^^^^^^^^^"; :
1010 FOR B=0 TO J-@ :: PRINT
 #I:"      ";B$(B)
1020 NEXT B :: PRINT #I: : :
 :
1030 NEXT M :: IF I<>0 THEN
1050
1040 PRINT "       PRESS ANY
 KEY";:: GOSUB 750
1050 RETURN
```

JACK SUGHRUE, Box 459, E.Douglas MA 01516

HUNTER VALLEY 99'ERS USERS GROUP
LIBRARY SOFTWARE GUIDE

AUGUST DISK OF THE MONTH REVIEW.

COL/MATHS (COLOUR MATHS)

This is the first of many maths programmes. In this game you get sums in good large clear letters, you must get three sums correct to get a new screen. The colours are different each screen but some are very hard on your eyes.

COUNTFUN

This game teaches young children discrimination of shapes and counting. It displays up to 4 different large shapes on the screen and the child has to count the number each shape, and then the total number of shapes altogether, but the characters can scroll off the screen if the user makes too many mistakes.

DIGITCLOCK

This programme has two parts:

1. Perpetual Calendar-This allows any year and month to be typed and that month and year comes up on the screen.
2. Digital Clock-This allows you to enter hour, minute and seconds to display that time on a digital clock.

H&T/L/DIV

This funny looking name is actually "Hare and Tortoise Long Division". This programme is a good game to practice or learn long division. It is a race between the hare and the tortoise, you are the tortoise and the computer is the hare. This is a very good game overall.

MATH/CHAL

This maths game allows you to enter the signs + / - and *. It then prints random sums on the screen and then you must answer. Division isn't always easy e.g.61/39

PIAN/ORGAN

One of the best organ programmes I've ever seen. It was written for the '99/4, and has 4 options: Organ, harmony, harpsichord and boogie. It also has 10 pre-written display tunes, or you can play your own.

READFAST

This programme displays a phrase or sentence on the screen for a period of time depending on the skill level. Then it erases the screen and you then re-enter the sentence or phrase.

SPELL/DOWN

This is a spelling game. It flashes up a word on the screen and you have to enter it, spelling the word correctly. The winner is the first person to reach the bottom box of a stack.

TINY/MATH

This programme puts a certain number of shapes on the screen, then the user has to guess the number of shapes.

TUNELVISON

A very good original maze game. It shows a plan view and a 3 dimensional view of a maze at ground level. An extremely interesting challenge.

WORLDMAP

This programme allows you to put points on the world map. If "impossible" latitude or longitude values are (accidentally) input, the programme doesn't ask for a correction. The programme attempts to find an impossible location and stops.

This disk will be available in the club library.

JASON HILES.

THE SEPTEMBER DISK REVIEW.

BY LOTHAR NOWAK

AMAZE

You are trapped in a maze and have to get out. So goes the story. By now you should be breathless with excitement.Another computer maze game. But wait a minute this one is not bad at all. The graphics present themselves as a 3D version and give you the feeling of walking down a corridor. You have to try to get out in as few moves as you can. I tried it and found it quite challenging. In fact,like my ability in most computer games,I failed. All is not lost there is help available if you need it. Push the H for help key.VERDICT-VERY GOOD.

CHANNEL PATROL

In this game you are in a submarine trying to protect the Bristol Channel from enemy subs. You must destroy these subs using only your twelve torpedoes. This game is a simpler version of another more famous game and while the graphics are adequate the game itself could provide some diversion. VERDICT-FAIR.

COLOR VISION PATTERNS

A great example of what this TI can do. Forms intricate patterns and colours(I think the colours are good as my colour does not work on my TV.) Good program to show off to Tricky Dicky computers owners. VERDICT-GOOD.

DARTS

My own personal favourite on this disk. Being a good all round armchair sportsman I find this game very good for a rainy day. You have a choice of three dart games including 301,Cricket or around the board. The graphics are very good and you can manipulate the speed,direction of the dart. This game will not leave you with a sore arm at the end of the night but will provide you with some entertainment. Might cause RSI if not careful. VERDICT-EXCELLENT.

DESERT DILEMMA

Well what can you say about this.One of these word games,based on a desert theme. You are in some desert kingdom trying to help someone and find something.At the end of each statement there are two choices. Which one do you want.Enough said. Somewhere there out in computerland there is someone who will like this.VERDICT-TWO CHOICES-YUK OR YUKYUK.

GALLERY

This program has three lovely paintings with eyes that follow flies and when the flies land they are eaten up. Sounds great doesn't it. Very

good graphics and highlights the fact that there must be people out there with not a real lot to do. VERDICT-DIFFERENT.

ROMAN EMPIRE

Another word game. I guess that some people like these type of games. This one is based on the early roman days and allows you to be a roman,and go through the sort of days that romans had. VERDICT-ONE FOR THE FANS.

WARLOADS

This time we have a game where we can search and destroy alien space beings.(Sound familiar?)This game however does feature some fairly good graphics and would present a diversion for the kids. VERDICT-ONE FOR THE KIDS.

WORMSPIDERS

You have to get your worm across a number of screens without being bitten by nasty redback spiders. A simple enough game but not that easy to achieve. The younger set would like this one. VERDICT-GOOD FOR YOUNGER ONES.

P.S. The opinions above are those of the humble? author and reflect only his bad taste.Perhaps some folk might like DESERT DILEMMA.

THE HV 99ERS BASIC GROUP CLASS NOTES

BY

PAUL MULVANEY

READ and DATA were covered this month. The READ statement allows you to assign values to variables. The variables may be numeric or string. The values are stored in DATA statements which may be at any point in the program, they dont have to be directly before or after the READ statement.
The READ statement is used in the form READ A,N$,R,C,L$,..etc. Each variable must be separated by a comma.

The DATA list contains the values to be assigned to the variables specified in the READ statement, the values are separated by a comma and MUST be in the correct order. If the variable is a numeric variable and the DATA is a string then a DATA ERROR will result.

An example of READ/DATA usage follows;

```
100 CALL CLEAR
110 FOR L=1 TO 4
READ A,N$
130 PRINT N$,A
140 PRINT
150 NEXT L
160 DATA 25,STEVE,35,NEVILLE
170 PRINT "A SPACE LINE"::
180 DATA 45,BOB,15,RODNEY ::
190 PRINT "ANOTHER SPACE"::
200 DATA 5,JASON,55,SAM
210 GOTO 210
```

When the program is RUN the DATA pointer is set at the first DATA statement in the program. When the first READ statement is encountered the first two DATA values are assigned to the variables and the DATA pointer is set to the third DATA value. When the next READ statement is encountered the next two DATA values are assigned. The DATA can be anywhere in the program. The pointer will progressively move through the DATA as it is used. For the example the DATA used is in lines 160 and 180. Line 200 is not used. If we modify line 210 to GOTO 110 and RUN the program it will go through the first time as before but on the second time through after it READs the DATA in line 200 it will run out of DATA and stop with a DATA ERROR IN LINE 120. This is because there is no more DATA left as it does not automatically go back to the start of the DATA statements. Another problem with using READ/DATA is the error messages are sometimes misleading. To overcome the problem we could use the RESTORE statement. RESTORE resets the DATA pointer to a specified line. If the line does not have any DATA in it the pointer is set at the next DATA statement in the program. Add to the above program 205 RESTORE 170 and alter line 210 to GOTO 110 and see the difference between the first time through and the second.

To find out who was at the class on Tuesday enter this program:

```
100 CALL CLEAR
110 R=2
120 CALL SCREEN(15)
130 PRINT "HV99 BASIC GROUP"::
140 FOR L=1 TO 8
150 C=10
160 READ A
170 FOR LL=1 TO A
180 READ B
190 C=C+1
200 CALL HCHAR(R,C,B)
210 NEXT LL
220 R=R+3
230 NEXT L
240 GOTO 240
250  DATA  4,65,76,65,78,6,65,76,66,69,82,84,8,71,69,79,70,70,82,69,89,
6,77,
69,82,86,89,78
260   DATA  4,80,65,85,76,6,82,79,66,69,82,84,6,82,79,68,78,69,89,7,83,
84,69,
80,72,69,78
```

The main thing with DATA is to take particular care when you are inputing it to get the commas in the right spot and to match the numeric values to the appropriate variables.

Adventurers' Corner

WITH "THE ADVENTURER"

rodney gainsford

MISSION IMPOSSIBLE

* Sit in chair - white button disarms bomb, red button arms it.
* Get up
* Get badge - door sequence is white yellow blue.
* When thud sounds, frisk sabateur, take body and badge to white room.
* Show badge
* Break glass with recorder

GHOST TOWN

* In telegraph office move safe. Splice wires. The coded message says Shake topper stable.
* Take shovel and matches from dry goods store and dig manure. Get white crystals. Take compass as well. Look at it before and after you get to the horse shoe. Drop compass.
* Mount paint. Take spurs. Go stable. Go hole. Take keg. Empty keg. Take keg.
* Dig in large field and you get yellow powder.

PYRAMID OF DOOM

* To get into pyramid go into pool back where you started. Get water in canteen. Get large key. With shovel dig in desert north of pyramid. Get small key. Dig by pyramid. Unlock tiny door with small key. Move and drop stone. Light flashlight. Unlock big door with large key.
* Search the ashes. Get gold necklace. Wash coal. Get ruby. Take basket. Play flute. Go passage.

TREASURE SUMMARY

Tapestry Gold necklace Black pearl Gold teeth Jade carving Sapphire Platinum crown Emerald bracelet Gold coin Diamond necklace Gold pin Gold scarab Platinum bar .

.

INFIDEL

*After getting up collect all at firepit. Work tent and supply tent. Break lock on chest with axe. Remove and drop lock. Open chest. Get map and bef. At Nile drop knapsack. Open fill and close canteen.

ZORK III

* Break beam by dropping any object. Go south and push button.
*Push gold machine into jewel room. Sit on seat. Turn dial to 776. Push button. Take ring.

GOLDEN VOYAGE

* At fountain. Put tablet in fountain. Dig outside cave for second torch.
*At damp grotto. Tie rope to stalagmite. Drop rope. Climb rope.
*Wear mask. At cyclops throw globe. Go cave. Fill chalice. Save game. return to king. Give chalice.

THE COUNT

*In crypt with stake and cigarettes. Drive stake.

PRESCAN REVISITED

BY BOB CARMANY

The simple words "Pre-scan" are probably the cause of more confusion and misinformation than anything that TI has ever produced. The problem started when TI wrote the XB manual. One of the problems is that they appeared in the addendum to the manual rather than in the manual itself. Now, what is the "Pre-scan" function and what does it do?

When you load an XB program, you may have noticed that there is sometimes a rather long delay between the time that the program is loaded and the time that it actually starts the execution. Why? Well, the computer is doing some 'housekeeping' chores during this time to make sure that there is enough memory to perform all of the tasks asked of it. During this period of time, it is establishing space for variables, arrays and DATA statements. In addition, it goes through the program on a line-by-line basis to see if it recognizes all of the CALL's and to make sure that all of the subroutines are in order including those that are user defined). If your program is very long, this can take a relatively long time to do.

TI provided an 'escape' for this sometimes long wait. They gave you the ability to select which lines or which instructions that you wish to have pre-scanned. You can do it by turning the pre-scan off or on at selected points within your program. It is really very simple:
!@P- turns the pre-scan off &
!@P+ turns the pre-scan on.
Simple enough, isn't it?.

Now, let's look at a practical application of turning off and turning on the pre-scan in a program application. There is no better example than the FILE/READ program that I did for the July Newsletter. We will use it as an example.

First of all, you must realise that the default is for the pre-scan to be turned on (ie !@P+). It is automatic and need not be entered at the beginning of the program.

```
100  @=0 :: [=1 :: ]=2 :: _=3 :: \=4
:: GOTO 100 :: A$, CHOICE$, FILE$,
P$, PRINT$, Z$ :: A, DE, F, K, L, S,
Z :: CALL CLEAR :: CALL KEY ::  CALL
SCREEN :: !@P-
```

Let's examine this program line to see what we have done. First of all, we have established a series of numeric constants (remember, the pre-scan is on at this point). @=0, [=1, etc on through \=4. Next we have to trick the computer into allocating space for variables without actually executing the statements and assigning the values to them. We have done this with "GOTO 100". Next, we list all of the string variables in the program (ie. A$, CHOICE$, etc) and then the numeric variables (ie A, DE, etc) as well. Finally we list the CALLs in the program (ie CALL CLEAR, CALL KEY etc.). These are actually subroutines, you know. The last thing that we do is to turn OFF the pre-scan with !@P-. The main body of the program then follows until we get to line 600:

```
600 !@P+
610  CALL CLEAR :: CALL SCREEN(7) ::
DISPLAY AT(12,[):"YOU HAVE JUST
ENCOUNTERED A ":"FATAL I/O FILE
ERROR.":"PLEASE RE-ENTER YOUR FILE"
620  DISPLAY  AT(15,[):"PARAMETERS"
::FOR DE=] TO 1000 :: NEXT DE :: RUN
630    SUB    ERASE    ::    DISPLAY
AT(8,[):RPT$(" ",162)
640 SUBEND
```

Okay! What does all of this mean to the computer and how does it speed up execution? When we started, the pre-scan was ON by default. So, the computer began to pre-scan the program immediately after it loaded. However, the only line that was pre-scanned was line 100. That didn't take the computer very long but that particular line contained all of the information that was needed to allot space for the variables and other items.

When the end of line 100 was reached, the pre-scan was turned off so the computer didn't have to scan the main body of the program - a great time saver!

With the pre-scan turned off, the computer quickly reached line 600. In fact, it was almost

instantaneous! When line 600 was reached, the pre-scan was turned back on so that the computer could scan the user-defined subroutines. When those four lines had been scanned, the program began execution. Because the computer didn't have to go through the program on a line-by-line basis, the program seemed to execute immediately!

What we did is to 'ignore' some 49 program lines with the pre-scan because we included the information in the very first line of the program. We then turned off the pre-scan until we got to a point in the program where we needed to use it again (line 600). The time savings were enormous! For comparison, delete line 100 and line 600 and RUN the program. I hope that you all keyed it in from the Newsletter.

There are certain rules that have to be followed when using the pre-scan, though. Pre-scan must be ON when you:-

1) Use DATA statements
2) Use OPTION BASE
3) Make reference to a CALL statement
4) Use a DEF statement
5) Use a SUB statement or SUBEND

It becomes easier to organize your program to include some of these at the very beginning of the program along with your variables, arrays, etc.

The real problem arises when you try to figure out exactly where to turn OFF and turn ON the pre-scan and to make sure that you have included everything that you need to include in the right place. A real headache!!

There is, however, an 'easy way out'. ASGARD Software has marketed a program called, appropriately, PRESCAN IT! by J. Peter Hoddie. It will automatically read your program, create the necessary program lines to include everything, and insert the pre-scan commands in exactly the right places. This little 'gem' sells for $US10 and is well worth the rather paltry investment (Incidently, I reviewed this program in the June issue of MICROpendium), but for all you "die-hards", you can always do the job by hand...

READERS CORNER

WITH
JOE WRIGHT

This month has been a bit lean in regards to incoming Newsletters. We have received , TIUP (PERTH), BUG (BRISBANE), ROM (ORANGE COUNTY August) and TIDBIT (MEMPHIS August). BUT! don't be dismayed, there is some mighty good information in this little lot I can assure you.

Firstly across the continent to Perth. Two articles to point out to you. First is a listing for the game TIC-TAC-TOE. As the author states in his article OH! NO! not another one. YUP! it is, but with a difference, this has been developed using the SMALL-C compiler for the TI99/4A which was written by Clint Pulley. Who developed you say, Phil West, one of the solid supports of the TI in Perth and arguably one of the most solid in the whole of OZ . The programme Phil tells us is self teaching, I will have to believe him. I have no knowledge of C and the listing included has to be seen to be believed. The article as usual from Phil is well written and from what I can see reasonably easy to follow, I can't say that typing the programme in will be any easy job though. I recommend you read this article.

The second quality offering from TIUP is by Steve Wilkinson. The topic is in-bedding Assembly Language routines into Forth screens. This is the first article I have ever seen on this topic and I have tucked it into my Assembly Tutorial folder quick smart. For our members into Forth this article MUST be read, I hope that some of our people can follow up on this subject.

Now lets travel north for a visit to Brisbane, site of the 1988 WORLD EXPO.

The August edition of the BUG has an article by Rick Felzien from WEST JAX 99'ers. It is titled " UNDERSTANDING TI-DOS". It is a very, well presented and easily understood article on what is on a disk and what that data means to the system. GOOD STUFF!.

And also a TI-writer tip from Mike Dodd writing in L.A. Topics via Brisbane. Instead of counting the number of lines for the PL Command, include a .PL 32000 command at the start of your document. Then type .PL1 at the end of your document. The formatter will then suppress all form feeds, and will immediately stop at the end.

Now down to KINGSFORD SMITH Airport and board you QANTAS flight and first stop L.A., drive south to Orange county. I mentioned this in the IN THE NEWS but want to mention it again, The first in what I hope will be a series on imbedded graphics into TI-WRITER files has been written by ROGER MERRIT, this is the AUGUST ROM. Apparently our "MIDNIGHT MODEM SET", more widely know as the "NOCTURNALS" can't wait to get their grubby hands on this information. For those who are interested I have some additional copies of the first article, it discusses the operation of the printer head.

And now to MEMPHIS, August TIDBITS, three articles to draw your attention to. First one on console cleaning by Gary Cox,

The second was taken from the JULY edition of the Dallas 99 interface. I have not found a name to contribute the article too. So I will have to give a broadly based thank you to the whole of the Dallas Group and thank Tidbits as being our source. THANK YOU ALL!. The article is titled "MOV and WATER TOWERS". It is very good reading and describes using water as an example, how surge protectors stop the uglies which get onto power line from causing havoc in you TI.

The great mail out started last general meeting, feedback from those involved would be appreciated, next one should go out in OCTOBER, so long as people feel that is not too soon. That's all from me to you, in the mean time keep reading.

MULTIFUNCTION SATURDAY

A get-together of the HV99'ers is being planned for the LAST SATURDAY in NOVEMBER (28th). This day is to be a family social day out and a variety of activities have been already suggested for the day such as :-

* Sausage sizzle/barbacue
* Swap & Sell meet
* Games competition
* Raffle (good quality joystick suggested as prize)

What we need from YOU are more suggestions on activities AND a place to hold such an event.

TIGHTWAD TIP

OR

NEW RIBBONS

FOR OLD

BY RON PRATT

If you're using a printer that uses a ribbon, you can get extra life out of it by turning it over when it gets faint, because the printer head only uses the top half.

When that side starts to run dry too, however, you can rejuvenate it by making a foam pad with a slot in it through which the ribbon slides. Slip this pad under the ribbon while the spools are still in your printer, and let it come up against one of the trip levers or other part of your printer to hold it still while the ribbon passes through it.

All that remains now to make your ribbon like new again is to charge the pad with a few drops of **STAMP PAD INK** while winding the spool along with a pencil. Practise will help in getting the right amount of ink on the ribbon. If you get a little too much, it may drip out of the bottom of the pad. All you need to do then is wipe it up with a paper towel.

A new ribbon might cost around $7 whereas you will pay about $3.50 for a 75ml. bottle of ink will which will recharge many ribbons. Good luck all you grubby fingered Scrooges!

ASSEMBLY LANGUAGE

FOR THE LAYMAN

THIS MONTH BY GUEST COLUMNIST

PETER SMITH

My apologies go to Joe for the use of his title this month, but he started this idea and he can't really expect to get away scott-free, now can he?

Some of you may remember an article which Joe wrote, explaining disk access and setting an exercise for us to tackle.. namely to read a disk-based file in DV/80 format and display it on the screen.

Well I've attempted this assignment and, after much **much MUCH** learning I have finally got a program to do just what was suggested.

I finally completed the program a few weeks ago and, set out tonight to prepare it for the magazine.

Boy have I learnt something.. **COMMENT AS YOU GO.**

Boy has it been hard work trying to work out what I had done some few weeks ago.. Never again..

Anyhow about the program.. There is an occasional bug floating around so if you could assist I would appreciate it.

Most of the program is from Mr Molesworth's book "INTRODUCTION TO ASSEMBLY LANGUAGE FOR THE TI HOME COMPUTER" (p83) which I have found great (my appologies also to this fine gentleman for what I have done to his hard work).

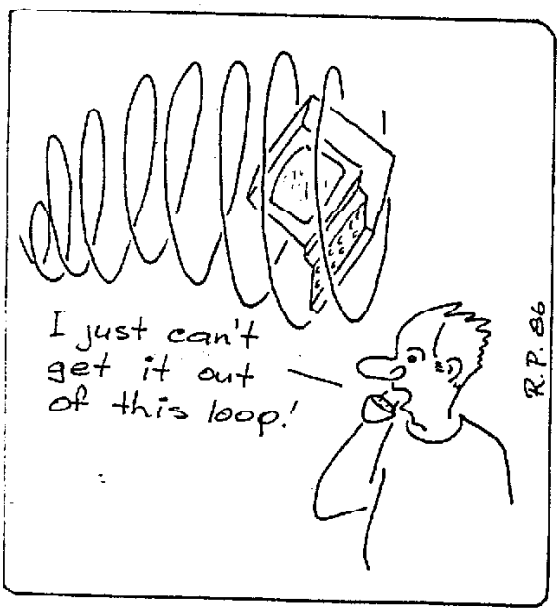
We have only a small class working with Joe but I imagine that there are many others using his magazine articles to teach themselves the joys of assembly language at home.

To you people doing this, I direct my request for your comments and suggestions on where I went wrong and how I should have 'done it'.

As a very raw beginner I would appreciate any comment or help which may be published to assist others trying to do this same thing. Experts may like to suggest other ways of writing the routines which I have come up with. If you have the time please assist me and others by writing to our editor..(I can guarantee that he will appreciate it as much as I.)

Anyhow here is the program...Try it and see if you can improve it...

Regards..
Peter Smith



```
*READ DV80 FILE AND DISPLAY
        DEF   BEGIN *NAME OF START OF PROGRAM*
        REF   DSRLNK,VSBW,VMBW,VMBR,VSBR,KSCAN *LIST OF INBUILT ROUTINES TO
STATUS  EQU   >837C *ADDRESS OF GPL STATUS BYTE*                        USE*
POINTR  EQU   >8356 *ADDRESS OF DSR POINTER*
BUFADR  EQU   >1000 *ADDRESS IN VDP RAM TO ACT AS RECORD BUFFER*
PABADR  EQU   >F80 *ADDRESS IN VSP RAM FOR PAB*
READ    BYTE  >02 *OP-CODE TO INCLUDE IN PAB TO TELL DSR TO "READ"*
CLOSE   BYTE  >01 *OP-CODE TO INCLUDE IN PAB TO TELL DSR TO "CLOSE"*
ONE     DATA  >0001 *SETS VALUE OF "ONE" TO 1*
CR      BYTE  >0D *HEX VALUE OF CARRIAGE RETURN*
EOF     DATA  >0 *END OF FILE FLAG*
PAB     DATA  >0014,BUFADR,>5000,>0000,>000A *THIS IS PAB DATA*
        TEXT  'DSK2.FILE1'
ERRMSG  TEXT  'I/O ERROR=' *DSR ERROR MESSAGE*
CPUBUF  BSS   >50 *ADDRESS IN CPU RAM TO ACT AS A BUFFER FOR RECORDS*
RETURN  BSS   2 *ADDRESS TO SAVE RETURN ADDRESS IN*
LEN     BSS   2 *ADDRESS TO SAVE LENGTH OF RECORD IN*
WR      BSS   >20 *ADDRESS TO ACT AS WORKSPACE REGISTER*
SAVE1   BSS   >2 *
HEXFF   BYTE  >FF *
BUFF1   EQU   >8375 *
*************************************************************
* END OF SET-UP AREA NOW ONTO THE ACTUAL WORKINGS...*
*************************************************************
BEGIN   MOV   R11,@RETURN *SAVE THE RETURN ADDRESS *
        LWPI  WR *LOAD THE WORKSPACE POINTER*
        LI    R8,>0001 *
        LI    R0,PABADR *VDP RAM ADDRESS FOR PAB*
        LI    R1,PAB   *CPU RAM ADDRESS OF PAB DATA*
        LI    R2,>14 *LENGTH OF DATA*
        BLWP  @VMBW *WRITE THE PAB DATA INTO VDP RAM*
        BL    @DSR *OPEN THE FILE-NOTE PAB BYTE 0="00" FOR "OPEN"*
        MOVB  @READ,R1 *NOW MOVES OP-CODE TO "READ" INTO R1*
        LI    R0,PABADR *LOAD PAB ADDRESS INTO R0*
        BLWP  @VSBW *PUT "READ" INTO PAB BYTE 0*
        CLR   R4 *CLEAR THE RECORD COUNTER*
        CLR   R5
READF   BL    @DSR *PERFORMS DSR ROUTINE*
```

THE INFORMATION PAGE

IN YOUR NEWSLETTER THIS MONTH

Random Bytes	B. Carmany
Fuel Consumption Calculator/Graph programs	A. Member
Multi-plan Printer Controls	P. Smith
TI-Writer - Using a Command File	Melbourne TImes
Program/Hints for Mini-Memory	K. Cox
In the News - snippets from other newsletters	A. Wright
Magical Mystery Trip - a report	A. Driver
Impact 99	J. Sughrue
August/September Disk of the Month reviews	Hiles/Nowak
BASIC for Beginners	P. Mulvaney
Adventurers Corner	R. Gainsford
Pre-scan Revisited	B. Carmany
Readers Corner - reviews on Newsletters received	A. Wright
Tightwad Tip - new ribbons for old!!	R. Pratt

PLUS MUCH MUCH MORE!!!!!

COMING EVENTS

Next Committee Meeting: Tuesday 6th October
Next General Meeting: Tuesday 13th October

AGENDA FOR OCTOBER MEETING

Demo of Assembly Language routines by Joe Wright
TI Trivia Challenge with Peter Smith

CLASSES AVAILABLE FOR MEMBERS

BASIC group conducted by Paul Mulvaney at the Warners Bay High on Tuesday 15th 22nd & 29th September

ASSEMBLY group conducted by Joe Wright. The next meeting will be held on Tuesday 22nd September at Albert Andersons - Tarro.

FORTH group conducted by Richard Terry will not meet till further notice - Richard is taking a long overdue holiday.

ANNUAL SUBSCRIPTIONS

Subscriptions to the Group cover the period 1 July to 30 June following year. Membership enquiries are welcome; please address all enquiries to the Secretary.

The annual subscription is:
Australian Residents...$20
Overseas Residents.....$40 (airmail)
$30 (surface)

Back issues of our Newsletter are available for $1 plus postage